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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,680	07/08/2003	Hisayuki Inoue	81872.0048	9818

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EXAMINER

TRAN, LONG K

ART UNIT

PAPER NUMBER

2818

DATE MAILED: 10/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/615,680

Applicant(s)

INOUE, HISAYUKI

Examiner

Long K. Tran

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 3, 5 - 8 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/14/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Preliminary Amendment

1. This office action is in response to Preliminary Amendment filed on June 28, 2004.
2. Claims **1 – 3** have been amended.
3. Claims **5 – 8** have been added.
4. Claims **1 – 8** are presented for examination.

Priority

5. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed on July 08, 2003.

Information Disclosure Statement

6. This office acknowledges of the following items from the Applicant:
Information Disclosure Statement (IDS) filed on October 14, 2003.
The references cited on the PTO -1449 form have been considered.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims **1, 3, and 5 – 7** are rejected under 35 U.S.C. 102(b) as being anticipated by Krausse, III (US Pat 4,891,686).

Regarding claims **1, 3, and 5 – 7**, Krausse discloses an apparatus 10 (fig. 3), comprising:

- a connecting conductor pattern as metal leads G (fig. 3) formed on a substrate 52 (fig. 4B);
- a device electrode pad formed on an electronic device 12 (fig. 3); and
- a plurality of wire thin lines W (fig. 3; column 7, lines 1 – 7) respectively connecting a plurality of portions on the connecting conductor pattern and a plurality of portions on the device electrode pad on the electronic device, wherein the plurality of wire thin lines differ from one another in mechanical characteristic frequencies in their connected states (fig. 3, the plurality of bond wires W are shown with different lengths, hence yielding different mechanical characteristics).

9. Claims **1, 3 and 5 – 8** are rejected under 35 U.S.C. 102(b) as being anticipated by Grellmann et al. (US Pat 4,686,492).

Regarding claims **1, 3 and 5 – 7**, Grellmann et al. discloses an apparatus (figs. 1 and 2), comprising:

- a connecting conductor pattern 14, 16 or 18 (fig. 1) formed on a substrate 10 (fig.1);
- a device electrode pad formed on an electronic device 20, 22 or 24 (fig. 1); and
- a plurality of wire thin lines 28a, 28b, 28c, 34a, 34b, or 34c (fig. 1) respectively connecting a plurality of portions on the

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connecting conductor pattern (col. 2, lines 10 – 13) and a plurality of portions on the device electrode pad on the electronic device, wherein the plurality of wire thin lines differ from one another in mechanical characteristic frequencies in their connected states (fig. 1, the plurality of bond wires as shown have different lengths, hence yielding different mechanical characteristics).

Regarding claim 8, Grellmann et al. further shows the method according to claim 6, further comprising arranging the plurality of thin wire lines connecting the plurality of portions on the connecting conductor pattern and the plurality of portions on the device electrode pad parallel to each other at positions spaced apart from each other (as shown in fig. 1, conductor patterns 14, 16, 18 are arranged in parallel with electrode pads 20, 22, and 24).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Krausse, III (US Pat 4,891,686) / Grellmann et al. (US Pat 4,686,492) in view of Rostoker et al. (US Patent No. 6,373,447).

Regarding claim 4, Krausse, III / Grellmann et al. disclose the claimed invention of claim 1 except for the apparatus is used as an

in-vehicle part.

Rostoker shows semiconductor package 1000 (figure 10) with bond wire connections is wisely used as in-vehicle part (column 4, lines 27 – 36).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide the apparatus of Krausse, III / Grellmann et al. as an in-vehicle part as shown by Rostoker, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use.

Allowable Subject Matter

12. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is an examiner's statement of reasons for the indication of allowable subject matter: Claim 4 is allowable over the prior art of record because none of the prior art whether taken singularly or in combination, especially when these limitations are considered within the specific combination claimed, to teach:

The mechanical characteristic frequency of one of a plurality of wire thin lines is basically a frequency other than n or $1/n$ times the mechanical characteristic frequency of the other wire thin lines.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably


accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Long K. Tran whose telephone number is 571-272-1797. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Long Tran 
October 14, 2004


David Nelms
Supervisory Patent Examiner
Technology Center 2800